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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/534,192	03/24/2000	MASAHIRO MINOWA	P4986a	2002

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EPSON RESEARCH AND DEVELOPMENT INC
INTELLECTUAL PROPERTY DEPT
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EXAMINER

EBRAHIMI DEHKORDY, SAEID

ART UNIT	PAPER NUMBER
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2626

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DATE MAILED: 12/31/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/534,192

Applicant(s)

MINOWA ET AL.

Examiner

Saeid Ebrahimi-dehKordy

Art Unit

2626

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5. 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1,3-11,13-21,23-32 are rejected under 35 U.S.C. 102(b) as being anticipated by Kawanabe (U.S. patent 5,806,997)

Regarding claim 1,11 and 21 Kawanabe discloses: A printer controller (please note Fig.7 item 21 the printer controller, column 10 lines 14-16) comprising: an evaluating unit that detects a specific data sequence in a send data stream sent to a printer (please note Fig.7 column 11 lines 9-14) a generating unit responsive to the evaluating unit detecting the specific data sequence in the send data stream, that divides the send data stream into a plurality of data stream segments not containing the specific data sequence (please note column 11 lines 23-41) the plurality of data stream segments functioning the same as the send data stream (column 11 lines 42-47) and a sending unit responsive to the evaluating unit that sends one of the send data stream and the plurality of data stream segments to the printer based on the detection result of the evaluating unit (please note Fig.8 column 12 lines 15-67 and column 13 lines 1-4).

Regarding claim 3,13 and 23 Kawanabe discloses: the printer controller as in claim 2, wherein: the generating unit generates a parameter block for each data stream segment according to the number of segments generated from the send data stream (please note column 12 lines 15-47)

Regarding claim 4,10,14,20,24 and 31 Heath discloses: The printer controller as in claim 1, wherein: the specific data sequence is a data sequence of a real-time command of a printer (please note column 11 lines 27)

Regarding claim 5,15 and 26 A printer controller that transmit the send data stream to a printer, the send data stream including a print data sequence arranged in a matrix and having length parameters indicating the length in a row direction and the length in a column direction of the matrix (please note column 4 lines 65-67 and column 5 lines 1-16) said printer controller comprising: an evaluating unit that detects a specific data sequence in the print data sequence (please note Fig.7 column 11 lines 9-14) a determination unit responsive to a detection result of the evaluating unit (please note column 11 lines 9-22) that determines the position at which said specific data sequence is located if said specific data sequence is included in said print data sequence (please note column 11 lines 22-32) a division unit, responsive to a determination result of said determination unit, that inserts dummy data into the print data sequence and divides said print data sequence into a plurality of divided print data sequences (please note column 12 lines 15-38) a conversion unit responsive to a determination result of said determination unit that produces length parameters representing the lengths of respective divided print data sequences from the length parameters of the send data

Art Unit: 2626

stream (please note column 11 lines 9-22) and a transmission unit responsive to the evaluating unit that transmits one of the send data stream and a plurality of data stream segments to the printer (please note column 11 lines 9-17) the plurality of data stream segments including the divided print data sequences produced by said division unit and respective length parameters produced by said conversion unit (please note column 12 lines 48-67 and column 13 lines 1-4).

Regarding claim 6,16 and 27 Kawanabe discloses: The printer controller as in claim 5, wherein said division unit divides said print data sequence a plurality of divided print data sequences without inserting dummy data into said print data sequence when said determination unit determines the specific data sequence is located starting from a position corresponding to the bottom row of the matrix (please note column 3 lines 35-67 and column 4 lines 1-22).

Regarding claim 7,17 and 28 Kawanabe discloses: The printer controller as in claim 5, wherein said division unit determines the length of dummy data to be inserted in accordance with the length parameters of said send data stream (please note column 10 lines 35-53).

Regarding claim 8,18 and 29 Kawanabe discloses: The printer controller as in claim 5, further comprising: a print start position specifying unit that produces data specifying the print start positions of respective divided print data sequences produced by said division unit and wherein said transmission unit transmits to said printer said print start positions specifying data produced by said print start position specifying unit with the plurality of data stream segments (please note column 11 lines 9-20).

Regarding claim 9,19 and 30 Kawanabe discloses: The printer controller as in claim 5, wherein the column direction of said matrix is substantially the same as the printing medium feeding direction of said printer (please note column 4 lines 65-67 and column 5 lines 1-16).

Regarding claim 25 and 32 Kawanabe discloses: The data storage medium as in claim 21, wherein: the data storage medium comprises one of a compact disc, floppy disc, hard disk, magneto-optical disk, digital video disk, magnetic tape, and semiconductor memory (please note column 6 lines 42-48).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2,12 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawanabe (U.S. Patent 5,806,997) in view of Heath (U.S. patent 4,710,886)

Regarding claim 2,12 and 22 Kawanabe does not teach The printer- controller as in claim 1, wherein: the send data stream and each of the plurality of data stream segments have a header and a parameter block: and the generating unit generates a header for each of the plurality of data stream segments that is the same as the header of the send data stream On the other hand Heath discloses: The printer- controller as in claim 1, wherein: the send data stream and each of the plurality of data stream

Art Unit: 2626

segments have a header and a parameter block: and the generating unit generates a header for each of the plurality of data stream segments that is the same as the header of the send data stream (please note Fig.3b column 4 lines 44-56 and column 11 lines 7-19).

Therefore it would have been obvious to a person of ordinary skill in art at the time of the invention to modify Kawanabe's invention according to the teaching of Heath, Heath in the same field of endeavor teach the way blocks of data which is being send to the printer could be combine with the specific header for each segment.

Contact Information

- Any inquiry concerning this communication or earlier communications from the examiner should be directed to *Saeid Ebrahimi-Dehkordy* whose telephone number is (703) 306-3487.

The examiner can normally be reached on Monday through Friday from 8:00 a.m. to 5:30 p.m. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kimberly Williams, can be reached at (703) 305-4863.

Any response to this action should be mailed to:

Assistant Commissioner for Patents
Washington, D.C. 20231

Or faxed to:

(703) 872-9306, or (703) 308-9052 (for **formal** communications; please mark
"EXPEDITED PROCEDURE")

Art Unit: 2626

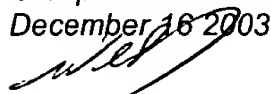
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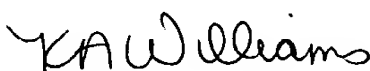
(703) 306-5406 (for *informal* or *draft* communications, please label "PROPOSED" or "DRAFT")

Hand delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application should be directed to the Group Receptionist whose telephone number is (703) 305-4750.

Saeid Ebrahimi-Dehkordy
Patent Examiner
Group Art Unit 2626
December 16 2003




KIMBERLY WILLIAMS
SUPERVISORY PATENT EXAMINER